

TROPICAL RAINFALL MEASURING MISSION

August 16, 1999 - August 22, 1999

DOY 228 - 234

Day of Mission 627 - 633

TRMM MISSION OPERATIONS

- TRMM is flying in the -X Forward direction as of 99-226, at 19:04:56z.
- The next Yaw maneuver is scheduled for September 2nd (99-245).
- Delta-V maneuver #117 is scheduled for August 23rd (99-235) using the ISP thrusters.
- The Beta angle range for DOY 235 to 241 is -23.1° to -14.8° (peaking at -23.75°).

TRMM SUBSYSTEM OPERATIONS

Attitude Control System

Delta-V maneuver #116 was successfully conducted on 99-230 at 15:18:00z and 16:03:48z, for durations of 44.0 and 26.5 seconds respectively, using the ISP thrusters. The off-modulation of the -Pitch thruster (#2) was 35.2% and 32.1% respectively (64.8% and 67.9% on time). The remaining fuel is 701.867 kg and the final apogee and perigee height is 354.84 km x 347.46 km.

The ESA experienced Moon interference in quadrants 1 and 3 on 99-228 through 99-231 at 04:57z. The ACS performed nominally during the transitions between 3 and 4 head control.

Flight Data System (FDS)/Command & Data Handling (C&DH)

The frequency standard continues to drift in the negative direction. The frequency standard offset was adjusted by 10 counts on 99/231 at 23:07z and is now set to x'76F'. The current drift rate is $-0.06 \mu\text{s/hr}$. The UTCF was adjusted by $-852 \mu\text{s}$ on 99-231 at 23:04z. The new UTCF value is 31535996.859820 sec with a current fine average delta value of $-1 \mu\text{s}$.

The flywheel dwell value incremented one count at 99-228/22:39:51z.

Q-Channel restarts occurred at 99-231 at 12:14:16z and 99-234 at 00:19:51z.

An EDAC multi-bit error was detected on 99-233 at 12:26:48z.

Reaction Control Subsystem (RCS)

The RCS subsystem performed nominally during this period. See the ACS section for specific Delta-V information.

Power Subsystem

The Power subsystem is operating nominally.

Electrical Subsystem

The Electrical subsystem operated nominally during this period.

Thermal Subsystem

The Thermal subsystem operated nominally during this period.

Deployables Subsystem

The Deployables subsystem performed nominally during this period.

RF/Communications Subsystem

The RF/Communications subsystem performed nominally during this period.

SPACECRAFT INSTRUMENTS

CERES

CERES personnel are developing a plan for operating the instrument with the +15 V DAA anomaly. The CCR which involves creating and testing TSMs to monitor the CERES current is expected to be closed out by September.

A series of instrument power-on events and calibrations is still expected near the end of August.

LIS

LIS performed nominally during this time period. A MSFC realtime command request was performed on 99/229 to reset and reconfigure the LIS instrument.

PR

PR performed nominally during this time period. The list of Internal Calibration times in which PR was not radiating is listed below:

1999:228:15:15:39 - 15:18:40z
1999:228:23:18:47 - 23:20:55z
1999:229:22:07:07 - 22:09:17z
1999:230:14:24:41 - 14:29:45z
1999:230:22:29:59 - 22:31:47z
1999:231:21:18:22 - 21:20:31z
1999:233:20:29:43 - 20:31:51z
1999:234:19:18:08 - 19:20:21z

TMI

TMI performed nominally during this time period.

VIRS

VIRS performed nominally during this time period with the exception of one VIRS Reset (AR #56). VIRS Reset #8 occurred on 99/232 at 15:28:10z. The instrument was fully reconfigured back to its nominal state at 15:33:40z.

GROUND SYSTEM

Y2K testing has been completed on string 3. String 3 operational readiness testing will be performed after completion of rollover testing. String 2 remains the prime Mission Planning string for normal spacecraft operations.

Testing continues with the new FORMATS R8B5V1, which contains fixes for FTP/gatekeeper compatibility and 5 digit orbit numbers (planning aid mod) among others. Orbit 10,000 for TRMM will occur on 99/236.

Event Reports

No Event Reports were opened during this week.

Generic Late Acquisition Reports (for TTRs 19639)

No Generic Late Acquisitions occurred during this period.

New Anomaly

No new Anomaly Reports were opened during this week.

Recurring Open Anomalies

The only recurring open anomaly for the week was the VIRS reset (see instrument section).

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